

# NOMENCLATRURAL NOTES ON CALLISTEMON R. BR. (MYRTACEAE)

by

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## ABSTRACT

Lumley, P. F. & Spencer, R. D. Nomenclatural notes on *Callistemon* R. Br. (Myrtaceae). *Muelleria* 6(6): 411-415 (1988). — The name *Callistemon rugulosus* (D. F. K. Schldl. ex Link) DC. is adopted for the species which has been known incorrectly as *Callistemon macropunctatus* (Dum.-Cours.) A. B. Court, a name whose basionym *Metrosideros macropunctata* Dum.-Cours. is of uncertain application. The name *Callistemon glaucus* (Bonpl.) Sweet is taken up for the species to which the name *Callistemon speciosus* (Sims) Sweet has been misapplied. Plants previously referred to *Callistemon paludosus* F. Muell. are now referred to *Callistemon sieberi* DC. with which *Callistemon salignus* (Sm.) Sweet var. *australis* Benth. *sensu stricto* is synonymous. The name *Callistemon pityoides* F. Muell. is taken up to replace the previously misapplied name *C. sieberi* DC..

## INTRODUCTION

This paper is presented ahead of a revision of the genus *Callistemon* in order to justify names used by Spencer and Lumley (1986) in edition 4, part 2 of 'Flora of South Australia'.

## NOMENCLATURE

**Callistemon rugulosus** (D. F. K. Schldl. ex Link) DC., Prodr. 3: 223 (1828)., as '*C. rugulosum*'. — *Metrosideros rugulosus* D. F. K. Schldl., Enum. pl. hort. berol. supp. 31 (July-Dec. 1814), as '*M. rugulosa*', nomen nudum. — *M. rugulosus* D. F. K. Schldl. ex Link, Enum. hort. berol. alt. 2: 27 (1822), as '*M. rugulosum*'. NEOTYPE (here selected): "Jard. de Berlin" 1826, *Otto s.n.* (G-DC!).

*Metrosideros scabra* Colla, Hortus ripul. 91 (1824). Lectotype (here selected): "ex horto 1831" (TO 2288!).

[*Callistemon macropunctatus* auctt. non (Dum. Cours.) A. B. Court, Victorian Naturalist 73: 175 (1957).]

The combination *Callistemon rugulosus* (Willd.) DC appears to be illegitimate being based on the invalid publication of *Metrosideros rugulosa* in D. F. K. Schlechtendal's supplement (July-Dec. 1814) to Willdenow's *Enumeratio plantarum horti regii botanici berlinensis*. Realising this, A. B. Court (*loc. cit.*) published the combination *Callistemon macropunctatus* (Dum.-Cours.) A. B. Court based on the next available name for this taxon, *Metrosideros macropunctata* Dum.-Cours., Bot. cult. edn 2, 7: 277 (June 1814), a synonym cited by de Candolle (1828) which has priority over *M. rugulosa* Schldl.

Du Mont de Courset's description was of young, non-flowering, cultivated material; the leaf dimensions, 7 lignes [14mm] by 1 ligne [2mm], fall well outside the normal range for *Callistemon macropunctatus* as now understood. We can find no illustration of *Metrosideros macropunctata* nor any herbarium specimen so labelled in any of the collections we have examined. The description cannot be satisfactorily applied to any species of *Callistemon*; consequently we regard this name as of uncertain application.

The next available names for this species are *Metrosideros rugulosa* D. F. K. Schldl. ex Link (1822) and *Metrosideros scabra* Colla (1824).

Since de Candolle did not explicitly cite *Metrosideros rugulosa* D. F. K. Schldl. ex Link (or Willd. ex Link) 1822 as the basionym for his combination *Callistemon rugulosus* and since *C. rugulosus* (D. F. K. Schldl.) DC. (1828) would be illegitimate as it would be based on the invalid *M. rugulosa* D. F. K. Schldl. (1814), there is

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a strong case for regarding the correct combination to be *Callistemon scaber* based on *Metrosideros scabra* Colla (1824). However there can be no doubt that de Candolle was familiar with Link's edition of the Berlin Botanic Garden catalogue, *Enumeratio plantarum horti regii berolensis altera* which was compiled by Link and in which *Metrosideros rugulosa* D. F. K. Schidl. ex Link was validly published. He cites this edition for the very next species of *Callistemon* that he describes on the same page (Prodromus 3: 223 (1828)) as *C. rugulosa*. Several other citations occur on neighbouring pages. Consequently we believe that the epithet *rugulosus* of Schlechtendal should be retained even though it was not explicitly cited by de Candolle. This approach is equivalent to that of A. B. Court (*loc. cit.*) who cited *Callistemon rugulosus* (Willd. ex Link) DC. as a synonym of *Callistemon macropunctatus*.

**Callistemon glaucus** (Bonpl.) Sweet, Hort. britt. edn. 2: 208 (1830). — *Metrosideros glaucus* Bonpl., Descr. pl. Malmaison 86, t. 34 (July 1815). — *Callistemon speciosus* (Sims) Sweet var. *glaucus* (Bonpl.) DC., Prodr. 3: 224 (1824). — *Callistemon glaucus* (Bonpl.) F. Muell., Fragm. 1: 14 (1858). NEOTYPE (here selected): Western Australia, 27.9 km east of Denmark, 34° 59' S., 117° 38' E., 14.x.1985, J. H. Ross 3009 (Neotypus: MEL 1551841. Isoneotypi: CBG, PERTH).

*Melaleuca paludosa* R. Br. in Ait. f., Hort. kew., edn. 2, 4: 410 (1812). NEOTYPE (here selected): King George's Sound, 27.xii.1801, R. Brown s.n. (Bennett no. 4714) (BM!).

[*Callistemon speciosus* auctt. non (Sims) Sweet: Benth., Fl. Austral. 3: 120 (1867).]

In 1803 a species collected by Peter Good was introduced into England and listed by Aiton (*loc. cit.*) as *Melaleuca paludosa*, 'Long-leaved red Melaleuca'. The brief description provided by R. Brown refers to the long leaves, shortly fused stamens and a distribution on the 'South-west coast of New Holland'. It can only apply to the species now known incorrectly as *Callistemon speciosus* (Sims) Sweet. This synonymy was recognized by Bentham (*loc. cit.*) but not by de Candolle (*loc. cit.*). Unfortunately none of the Brown specimens of this entity bear the name *Melaleuca paludosa*; one labelled *Melaleuca* is selected here as the neotype. Although de Candolle cites *Melaleuca paludosa* in the Prodromus (3: 212 (1828)) there is no specimen in his herbarium at Geneva. His description repeats that of Brown.

*Metrosideros speciosa* Sims, Bot. Mag. 42, t. 1761 (September 1815), the basonym of *Callistemon speciosus* (Sims) Sweet, is described as originating in New South Wales, not Western Australia from where *Melaleuca paludosa* is described. The brief description and the illustration do not permit the name to be applied with confidence to any recognised *Callistemon* species. De Candolle (*loc. cit.*), however, lists a variety *glaucus* based on *Metrosideros glauca* Bonpl. (*loc. cit.*) and the only specimens in his herbarium which bear the name *C. speciosus* are also designated as the variety *glaucus*. We have no doubt that the names *Metrosideros glauca* and *Melaleuca paludosa* apply to the same taxon, a conclusion reached by Bentham (*loc. cit.*) who regarded both names as synonyms of *Callistemon speciosus sensu lato*. Subsequent authors have followed Bentham with the exception of F. M. Bailey (Queensland fl. 2: 594 (1901)) who used the name for the eastern species now known as *Callistemon pachyphyllus* Cheel.

Apart from the uncertain application of the name *Metrosideros speciosa*, the dates given by Stafleu and Cowan (1976) show that *Metrosideros glauca* Bonpl. has priority. However both names are preceded by *Melaleuca paludosa* R. Br. in Ait. f. and the combination *Callistemon paludosus* (R. Br. in Ait. f.) F. Muell. might appear to be the correct name for this species. However *Callistemon paludosus* is the name applied to a widespread rheophytic yellow-flowered species of Eastern Australia. This follows misapplication of the name *Melaleuca paludosa* R. Br. in Ait. f. by Schlechtendal (*Linnaea* 20: 653 (1847)). Specimens sent to Schlechtendal by Behr, now on MEL 105295, form the basis of this misapplication. When Mueller

made the combination *Callistemon paludosus* (Fragm. 1: 14 (1858)) he cited “*Melaleuca paludosa* Schlechtendal . . . et forsán R.Br. in Ait.”. He intended the combination to be used for the eastern species but recognized the problem with Brown’s epithet.

Current practice is to regard *Callistemon paludosus* F. Muell. as a new species following article 72 of the International Code of Botanical Nomenclature (1983). Paraphrasing example 2: The name *Melaleuca paludosa* Schlechtendal is illegitimate being a later homonym of *Melaleuca paludosa* R. Br.. When Mueller transferred *Melaleuca paludosa* Schldl. to *Callistemon* he called it *Callistemon paludosus*. This name has priority from 1858 and should be cited as *Callistemon paludosus* F. Muell.

Unfortunately both Mueller and Schlechtendal cite R. Brown as the author of the epithet *paludosa* although both express doubt about applying Brown’s name to the eastern species. In general an expression of uncertainty is not sufficient to justify disregarding a citation. Article 34.2 is perhaps relevant here as is the citation in the Code (*loc. cit.*) of *Polypompholyx tenella* (R. Br.) Lehmann. Lehmann described *P. tenella* as a new species in Nov. Stirp. Pug. 8: 48 (1844). At the end of the description he wrote “an *Utricularia tenella* R.Br. ?”. However this is regarded as sufficient to include Brown’s name in parentheses.

If Brown’s epithet were unambiguously cited by Schlechtendal and Mueller then Article 55.2 should apply and the combination *Callistemon paludosus* (R. Br.) F. Muell. should refer to the western species to which Brown applied the epithet *paludosa*, irrespective of Schlechtendal’s misapplication of the epithet in *Melaleuca*.

If Mueller had explicitly excluded the type of *Melaleuca paludosa* he would be considered to have published a later homonym (Art. 48). However, he merely expressed doubt and it seems certain that he did not know how to apply Brown’s description. His description of *Callistemon glaucus* on the same page of the *Fragmenta* (*loc. cit.*), omits any citation of *Melaleuca paludosa* R. Br.

It appears that the situation is not clear cut. We have decided therefore to regard the name *Callistemon paludosus* F. Muell. (1858) as applicable to the eastern species for the following reasons:

- 1) it preserves the traditional and current usage of the epithet
- 2) the epithet *paludosus* will not be transferred from one species of *Callistemon* to another with resulting confusion
- 3) the epithet *paludosus* will no longer be used for any species of *Callistemon* since a prior name exists for the eastern species currently so named (see below under *C. sieberi*).

*Callistemon sieberi* DC., Prodr. 3: 223 (1828). LECTOTYPE (here selected): *s. loc.*, 1825, Mr. Sieber 637 (G!). ISOLECTOTYPES: Museo Lond. *s. dat.*. “W. Sieb. Esq.” *s.n.*, “Aus. D. Herb. Zalbruckner” (PRC!); “Nova Holland. Sieber No. 637 suppl.”, *s. dat.* (W!); “Nova Holl. No. 637” (W 177939!).

*C. paludosus* F. Muell., Fragn. 1: 14(1858). LECTOTYPE (here selected): “ad fl. Onkaparinga”, Nov. 1849, *F. Muell. s.n.* (MEL 105295). — *Melaleuca paludosa* sensu Schldl., *Linnaea* 20: 653 (1847), non R. Br. in Ait. f. Hort. kew. edn. 2, 4: 410 (1812).

*Callistemon salignus* (Sm.) Sweet var. *australis* Benth. Fl. Austral. 3: 121 (1867). LECTOTYPE (here selected): “in running stream. 49” *s.d.*, *H H Behr.* 49. Also additional note in Behr’s hand “in rivulo Tanunda”. (MEL 105531).

[*Callistemon salignus sensu lato* auct., non (Sm.) Sweet, Hort. britt. edn. 1: 155 (July-Oct. 1826).]

[*Callistemon australis* (Benth.) Cheel *sensu* J. M. Black, Fl. S. Austral. edn. 2: 605 (1952) apparently *nom. invalid.*]

This species, now known incorrectly as *Callistemon paludosus* F. Muell. (see above and in Spencer and Lumley, *Muelleria* 6(4): 298 (1986)), is a widespread and variable rheophyte. At one extreme, its size, leaf dimensions, filament length and

perigynium vestiture approach that of the small-leaved *Callistemon* of wet montane heathland known currently as *C. sieberi* DC. We have examined a wide range of specimens of both and are convinced that they are distinct. However, the types of *C. sieberi* DC. do not fall within the range of variation of the montane species currently known under that name. They do lie within the range of variation of the rheophytic species currently known as *C. paludosus*. Consequently we are obliged to transfer the name *C. sieberi* to the rheophytic species. Bentham, Fl. Austral. 3: 121 (1867), has also expressed doubt over the use of the epithet *sieberi* for the montane taxon.

Black (*loc. cit.*) refers the rheophytic species (now to be known as *C. sieberi*) to *C. salignus* (Sm.) DC. and to *C. salignus* var. *australis* Benth.

The combination *C. salignus* was first made by Sweet (Hort. britt. ed. 1: 155 (July-Oct. 1826)) whose publication preceded that of de Candolle, Prodr. 3: 223 (1828) who is generally but incorrectly cited as the author of this combination.

Bentham's broad concept of *C. salignus* is not shared by recent authors. His var. *australis* includes material now referable to *C. pallidus* (Bonpl.) DC. as well as to *C. sieberi* DC. We have lectotypified var. *australis* with a specimen collected in South Australia by H. H. Behr, thereby restricting its use to material correctly known as *Callistemon sieberi* DC.

*C. australis* (Benth.) Cheel *sensu* J. M. Black (*loc. cit.*) is an illegitimate combination apparently never published by Cheel.

**Callistemon pityoides** F. Muell., Chem. & Drugg. Australas. Suppl. 5: 94 (1883). LECTOTYPE (here selected): Ovens River, xii.1882, C. Falck *s.n.* (MEL 652908).

[*C. sieberi* auctt., (e.g. Burbidge and Gray, Flora of the Australian Capital Territory 268 (1970)) non DC., Prodr. 3: 223 (1828).]

*Callistemon pityoides* is the name Mueller applied to a rare fine-leaved montane plant found in north-east Victoria and south-east Queensland. In conformity with current practice we consider this taxon to be only a variant of the common montane species incorrectly known as *C. sieberi* (see above). Examination of a wide range of material of this species has reinforced this opinion. Consequently we accept the name *C. pityoides* as the only available published name for this species.

#### NAMES OF UNCERTAIN APPLICATION

*Callistemon macropunctatus* (Dum.-Cours.) A. B. Court, Victorian Naturalist 73: 175 (1957). — *Metrosideros macropunctata* Dum.-Cours., Bot. cult. edn 2, 7: 277 (June 1814), type unknown.

*Metrosideros speciosa* Sims, Bot. Mag. 42 t. 1761 (1815).

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